

Recovery Plan Action Status

Plan Name: Recovery Plan for the Steller Sea Lion Eastern and Western Distinct Population Segments (*Eumetopias jubatus*)

Plan Status: Final

Plan Date: 05-Mar-08

Lead Agency: NMFS

Lead Office:

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Steller sea-lion (<i>Eumetopias jubatus</i>)	1	1.1.1	Estimate trends for pups and non-pups via aerial surveys	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (<i>Eumetopias jubatus</i>)	2	1.1.2	Monitor population trends in the Pribilof Islands (particularly the Walrus Island rookery) via aerial surveys or land-based counts	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (<i>Eumetopias jubatus</i>)	2	1.2.1	Continue to estimate survival, natality, and immigration/emigration rates through a branding/resight program	Not Started			Alaska Department of Fish and Game, National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (<i>Eumetopias jubatus</i>)	2	1.2.2	Promote cooperative pup branding/resight programs in Russia	Not Started			National Marine Fisheries Service , Russia	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (<i>Eumetopias jubatus</i>)	2	1.2.3	Develop an age-structured population model using medium format photos from aerial surveys	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (<i>Eumetopias jubatus</i>)	2	1.2.4	Determine pregnancy and parturition rates	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (<i>Eumetopias jubatus</i>)	2	1.3.1	Examine the effects of season, age, and sex on body condition	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (<i>Eumetopias jubatus</i>)	2	1.3.2	Develop improved indices of health, body condition, and reproductive status using chemical methods (e.g., hematology serum chemistries, and endocrine monitoring)	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	

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Steller sea-lion (Eumetopias jubatus)	2	1.4.1	Develop improved live capture techniques for general research needs	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	1.4.2	Develop improved non-lethal sampling techniques to assess health	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	1.5	Develop an implementation plan (and update periodically, to further integrate and prioritize the numerous recovery actions provided in this plan)	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	biennial updates
Steller sea-lion (Eumetopias jubatus)	3	2.1	Maintain, modify as needed, critical habitat designations	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	3	2.2	Redefine and catalog rookery and haulout sites and ensure their protection	Not Started			U.S. Fish and Wildlife Service, U.S. Forest Service, Bureau Land Management , National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	update every 5 years
Steller sea-lion (Eumetopias jubatus)	2	2.3.1	Collect and analyze scat samples and stomach contents to determine prey consumption	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	2.3.2	Develop stable isotope and fatty acid methodologies to assess prey consumption	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	2.3.3	Deploy instruments to obtain finer scale data on sea lion foraging habitat	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	2.3.4	Evaluate all information on sea lion foraging areas and develop a description of foraging needs	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	update periodically

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Steller sea-lion (Eumetopias jubatus)	2	2.4.1	Assess the relationships between oceanographic features and sea lion foraging ecology	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	3	2.4.2	Examine the influence of ecosystem variability on non-commercial prey species as an index to sea lion carrying capacity	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	2.4.3	Distinguish how natural and anthropogenic factors influence marine ecosystem dynamics and subsequently sea lion population dynamics	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	3	2.5.1	Determine the physiological diving capabilities and evaluate how this limits the ability to forage successfully	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	2.5.2	Determine the energetic costs of foraging to sea lions	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	2.5.3	Assess the nutritional value of prey by species, season, and area including digestibility and overall value to sea lions	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	2.5.4	Develop an energetics model to investigate the interrelationships?and sea lion growth, condition, and vital rates	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	

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Steller sea-lion (Eumetopias jubatus)	2	2.6.1	Improve groundfish stock assessment surveys to determine seasonal and inter-annual patterns of prey abundance, distribution, and movement at scales relevant to sea lions	Not Started			Alaska Department of Fish and Game, National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	2.6.10	Consider and implement conservation measures in herring and salmon fisheries in Alaska as appropriate	Not Started			Alaska Department of Fish and Game	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	3	2.6.2	Assess competition for prey with sympatric consumers (e.g., gadids and flatfish, fur seals, harbor seals, other marine mammals, and seabirds)	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	2.6.3	Utilize groundfish fishery observer data to assess the spatial-temporal distribution of the fishery	Not Started			Alaska Department of Fish and Game, National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	2.6.4	Assess effectiveness of sea lion closure zones around rookeries and haulouts using small-scale experiments	Not Started			Alaska Department of Fish and Game, National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	2.6.5	Assess the response of sea lions to changes in prey distribution and availability	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	2.6.6	Evaluate and implement current or equivalent fishery regulations to protect foraging habitat and prey resources for sea lions	Not Started			Alaska Department of Fish and Game, National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	

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Steller sea-lion (Eumetopias jubatus)	2	2.6.7	Explore the use of ecosystem based (multi-species) stock assessment models to set fishery catch limits to ensure adequate prey resources for a recovered sea lion population	Not Started			Alaska Department of Fish and Game, National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	2.6.8	Design and implement an adaptive management program for fisheries, climate change, and predation	Not Started			Alaska Department of Fish and Game, National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	3 years development, 10 years implementation
Steller sea-lion (Eumetopias jubatus)	2	2.6.9	Prepare a habitat conservation plan under section 10 of the ESA for fisheries authorized by the State of Alaska	Not Started			Alaska Department of Fish and Game	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	3	3.1.1	Monitor and evaluate incidental take in commercial fisheries through observer and self-reporting programs	Not Started			Alaska Department of Fish and Game, National Marine Fisheries Service , United States Coast Guard	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	3	3.1.2	Monitor and evaluate incidental take in non-commercial fisheries	Not Started			Alaska Department of Fish and Game, National Marine Fisheries Service , United States Coast Guard	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	3	3.2.1	Monitor intentional take via shoreline surveys for carcasses near suspected conflict 'hotspots' and by encouraging reporting of illegal shooting through NMFS's enforcement hotline	Not Started			Alaska Department of Fish and Game, National Marine Fisheries Service , United States Coast Guard	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	3	3.2.2	Reduce threat of illegal shooting by developing and promoting use of non-lethal deterrents for commercial fisherman	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	

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Steller sea-lion (Eumetopias jubatus)	3	3.3.1	Develop and promote non-lethal means of deterring sea lions from hauling out on docks	Not Started			National Marine Fisheries Service , United States Coast Guard	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	3	3.3.2	Continue to publicize "no feeding" regulations in harbor areas and keep active programs for notification and enforcement, to minimize frequency and severity of sea lion-human interactions	Not Started			National Marine Fisheries Service , United States Coast Guard	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	3	3.4.1	Publicize and enforce existing no-transit areas to minimize vessel and aircraft disturbance of rookery sites	Not Started			National Marine Fisheries Service , United States Coast Guard	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	3	3.4.2	Review and revise existing Marine Mammal Approach Guidelines and provide to charter operators and other mariners to minimize disturbance at haulouts	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	3	3.5.1	Coordinate research efforts to reduce potential for unnecessary or duplicative research-related take	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	3	3.5.2	Monitor and minimize unintentional take associated with research activities to reduce the direct and indirect impacts associated with research	Not Started			National Marine Fisheries Service , United States Coast Guard	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	4.1.1	Conduct epidemiological surveys	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	

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Steller sea-lion (Eumetopias jubatus)	2	4.1.2	Develop and implement methods for parasite evaluations	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	4.1.3	Develop and implement methods to test immune system functioning	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	4.1.4	Evaluate causes of mortality by examining dead and live animals of all age and sex classes	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	4.1.5	Develop disease management plans	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	4.1.6	Develop an unusual mortality events (UMEs) management plan	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	4.1.7	Develop models to simulate disease impacts on energetics, physiology, abundance and demographics	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	4.2.1	Design a contaminant research and management plan	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	4.2.2	Collect samples from free-ranging sea lions and environmental 'hotspots' for use in contaminant-related research	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	4.2.3	Examine blood and tissue samples for evidence of contaminant-linked endocrine effects	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	4.2.4	Modeling contaminant impact and effect	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	4.3.1	Understand predator life histories, biology, and ecology - captive work	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	

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Steller sea-lion (Eumetopias jubatus)	2	4.3.2	Determine killer whale diets	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	4.3.3	Develop methods to obtain samples from live killer whales	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	4.3.4	Expand the stranding network to increase samples of killer whales available for research and, in so doing, to improve understanding of killer whale predation on sea lions	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	4.3.5	Determine killer whale distribution and behavior across the North Pacific	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	4.3.6	Estimate numbers of killer whale ecotypes in time and space	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	4.3.7	Develop models to simulate predation rates based on killer whale energetics and abundance and Steller sea lion demographics	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	5.1	Reduce damage to sea lions and their habitat from discharges of pollutants by developing preventive measures	Not Started			National Marine Fisheries Service , United States Coast Guard	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	5.2.1	Reduce discards of marine debris (e.g., trawl web, packing bands), to reduce the potential for sea lion entanglement	Not Started			National Marine Fisheries Service , United States Coast Guard	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	3	5.2.2	Cleanup derelict gear and beached debris, to reduce the potential for sea lion entanglement	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	

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Steller sea-lion (Eumetopias jubatus)	2	5.3.1	Continue and expand the Alaska stranding network to increase coastal coverage and community involvement in monitoring sea lion mortality	Not Started			Alaska Department of Fish and Game, National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	5.3.2	Survey selected areas for dead stranded sea lions	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	5.3.3	Expand tissue sampling efforts to improve the information obtained from dead sea lions	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	5.3.4	Monitor the incidence and impact of sea lion entanglement in marine debris	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	5.4	Effectively administer the Steller sea lion recovery program by continuing to provide a recovery coordinator staff position	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	5.5	Improve sea lion conservation by consulting with the State of Alaska on actions that are likely to adversely impact Steller sea lions	Not Started			Alaska Department of Fish and Game, National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	3	5.6.1	Encourage and facilitate public reporting of sea lion observations	Not Started			Alaska Department of Fish and Game, National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	3	5.6.2	Publicize current conservation efforts and protective measures	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	

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Steller sea-lion (Eumetopias jubatus)	2	5.7.1	Manage subsistence harvests and evaluate the efficacy and accuracy of using retrospective subsistence harvest surveys	Not Started			Alaska Department of Fish and Game, National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	5.7.2	Support Alaska Native subsistence use information programs	Not Started			Alaska Department of Fish and Game, National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	5.7.3	Analyze carcasses from subsistence harvest to assess age, body condition, and other relevant information to ensure safety of carcasses for human consumption	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	5.7.4	Document local knowledge and cultural science (Traditional Ecological Knowledge - TEK) pertaining to sea lions to better understand changes in sea lion movement (local and seasonal), feeding patterns and prey, seasonal haulouts, predation and ecosystem dynamics	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	
Steller sea-lion (Eumetopias jubatus)	2	5.8	Improve the effectiveness of research for Steller sea lion recovery by instituting a "fast track" process for expediting NMFS research permits for Steller sea lions.	Not Started			National Marine Fisheries Service	Work type not yet selected	Labor type not yet selected	